

METHOD AND APPARATUS FOR DETECTION OF MICROSCOPIC PATHOGENS

ABSTRACT OF THE DISCLOSURE

5 Detection apparatus for use in the detection of the presence of a
selected pathogen in a sample are disclosed. Such apparatus include: a substrate
with a detection region on a surface thereof, the detection region having
microstructures including grooves formed therein that will align liquid crystal
material in contact therewith, the width and depth of the grooves being in the range
10 of 10 μm or less; a blocking layer on the surface of the detection region of the
substrate that does not disrupt the alignment of liquid crystal material in contact
therewith, the blocking layer blocking nonspecific adsorption of pathogens to the
surface; and a binding agent on the surface of the detection region of the substrate,
the binding agent specifically binding the selected pathogen.